DOCUMENT RESUME

ED 209 804 EC 140 318

AUTHOR Millsap, William
TITLE Striking a Balance in Educational Aid tc the Handicapped: Some Thoughts on General Education and PL 94-142.
PUB DATE [80]
NOTE 32p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Administrative Problems; Community Role; Compliance (Legal); Cost Effectiveness; *Decision Making; *Disabilities; *Educational Planning; Models; Needs Assessment; *Policy Formation; *Resource Allocation
IDENTIFIERS *Education for All Handicapped Children Act

ABSTRACT

A social anthropologist suggests that other decision making models besides the consensual one (which assumes that the public behaves in accordance with values and attitudes) should be adopted by education as a result of shrinking resources, and discusses approaches to making decisions resulting from P.L. 94-142, the Education for All Handicapped Children Act. He suggests that planning should be oriented tc multiobjective needs of each school district and determined locally rather than formed by distant bureaucratic standards. Needs assessments and cost benefit studies should be undertaken to determine the local payoff for the district, the tradeoffs available to administrators, and the degree of equity achieved to teachers and students. Charts depict steps for assessment of community development, the application of an impact assessment model to local school systems, and tradeoff planning and assessment. (CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

APR 6 1981

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED209804

STRIKING A BALANCE IN EDUCATIONAL AID TO THE HANDICAPPED: SOME THOUGHTS ON GENERAL EDUCATION AND PL 94-142

Dr. William Millsap
Social Anthropologist
Washington State University
Pullman, Washington 99163

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

William Millsap

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EC 140318

STRIKING A BALANCE IN EDUCATIONAL AID TO THE HANDICAPPED:

SOME THOUGHTS ON GENERAL EDUCATION AND PL 94-142

Anthropologists are usually concerned with only the social sector when we are called upon to do program and policy studies. Few of us have sufficiently recognized the way in which our sector must mesh with the defined responsibilities of other professionals. Indeed, we are frequently ill-prepared to interrelate our findings with findings of others in terms of national and/or regional and even local priorities. More often than not, social scientists are "fuzzy" when it comes to designing programs and policies for the operationalization of various kinds of social goals.

This paper shall discuss some aspects of how goals might be established with respect to payoffs and the way in which tradeoffs are made in the decision-making process. The fundamental concern for equity is also begged in the examination of these two concepts by considering various techniques whereby some degree of equity might be built into the assessment process of any program, policy and/or project. It will be argued that several types of quantitative procedures as well as qualitative ones should be adopted by professionals as they seek the means for determining the concessions or tradeoffs that are necessary for initiating and making decisions in order to insure equity for every concerned public.

End of an Era

During the last decade, we have all been witness to a considerable shift in the American Dream. As Americans, we have been forced to realize

that the frontier is no longer with us and the availability of resources appears to be limited.[1] Unchecked growth may have to be curbed or at the very least, weighed against the other demands within the socio-cultural system. In this age of Proposition Thirteen, all of us are becoming aware of the fiscal constraints that are being placed upon the desires of the public. The old arguments are no longer adequate, especially when it comes to education. It is patently silly to argue for educational programs as if they are inherently holy and unassailable. We are now in a period. as some writers have indicated,[2] of where we must muddle through or as Walt Rostow has suggested, "get from here to there,"--wherever "there" is.[3] We are going to have to learn to live with diminishing expectations and do more with less. In short, this is a period of reassessment in which there is a need for realistic appraisals of where we are and where we are going in every arena of life particularly education.

While I shall address my remarks to the educational sector, my examples are derived from other areas of endeavor that I've been working in such as community development, social impact assessment, and evaluation research. It could be argued that these concerns have no relevance to the educational process. However, whether we like it or not, education is beginning to receive the same scrutiny and evaluational inquiry that is currently being addressed to other areas.

Education is more than an ideology, it is a process and increasingly, given the constraints of available funds to accomplish certain goals, education must be viewed in terms of productivity and cost-effectiveness of the many and varied programs and policies that are now in operation. There is a genuine and timely need to anticipate which programs and policies can

accomplish the most with respect to resource utilization. Whether we like it or not, educators are confronting a novel social climate in which new permutations must be developed so that education can be adaptive to the demands being placed upon it. It goes without saying that education at all levels may suffer given the current attitude of many legislatures.

Let's reflect on what has happened in higher education in the last few years. Some 129 small Liberal Arts colleges have gone bust--they were no longer able to maintain their programs in the light of fiscal urgencies.[4] In the larger state universities, many have experienced budget cuts. Even a wealthy institution like the University of Texas, the most endowed university in the United States, just recently had its budget cut some five million dollars and of all things the L.B.J. School. We have to recognize that the population of the U.S. is getting older with a larger proportion being over 65. This recent demographic phenomenon means that social spending will have to shift from child health and education programs to welfare programs for the elderly.[5] An attendant fact is that a smaller working population will have to bear these larger social costs--making them more skeptical about many types of social spending. Are we observing heresy or hard times?

Part of the problem seems to exist because we view education more as a value and a right rather than a previlege that must be earned and paid for. Accordingly, some questions need to be asked concerning the quality of programs, what they accomplish, who should participate in them, and finally, what kind of quality-product is being produced in terms of the monies spent.

When push comes to shove in the next few years, how will education fare? To be sure, education has a tremendous lobby and has been quite

successful in getting legislation passed at all levels, particularly at the federal level. But the upshot is that at the local level where constituencies have had to feel a growing tax burden, they are with alarming frequency turning down bond issues that seek to enlarge the tax bite. This comes as no surprise. Local and vocal community groups are no longer accepting requests to support education without questioning the viability of local programs and many have placed strict constraints on their own educational system. We have all come to recognize that resources are limited and distinct choices have to be made in terms of what education needs as opposed to what it wants. It is also true that too much is being expected of our educational system given current resource availability.

Philosophical Considerations

The willingness to change or not change in any group is based on certain ideological assumptions that are held by the group and this is just as true for educators.[6] Generally speaking, most educators operate with a consensual model that assumes that public behaves in accordance with values and attitudes and the extent to which they fail to agree can be accounted for by speaking of dissonance in the system. Many social scientists still speak of the "cllective consciousness" of society which permits us to behave as a mass society--we could just as well speak of the "collective unconsciousness" for all the concreteness that the consensual model displays. Everything that we do becomes a value; education is a value in and of itself and since we all agree that this is a good thing, we should naturally have more of it since this means more good. Educators frequently fail to recognize that the world can be viewed by different assumptions.

By way of contrast, we find that two other models are utilized in arriving at courses of action. Both of these rely more on the use of facts rather than values. Those who are charged with making our laws (as well as devising many of the constraints that operate in the educational arena) utilize the adversary model for arriving at decisions. This is a give and take process of logical presentation and proof in the legal environment. The results or outcomes are based upon which adversary can most adequately argue a position for what should or should not be done given the availability of facts. Any course of action opted for invariably results from the interpretation of what due process is, the idea of equity or justice, and which side presents the best argument for a particular position often arrived at by negotiation. The point is that, unlike the consensus model employed in education, there is no attempt to satisfy all sides; it is assumed that the parties or claimants are in opposition. Legal cases are rendered or laws are made as demonstrated by which side or constituency presents the best factual and logical arguments for proceeding in a given direction. If our society operated only by the consensual model, there might be little or no change within the society.[7]

In addition to the adversary model, the most common model for making decisions within the public sector is the economic model. Generally speaking, within our capitalistic society, decisions are made favorably for those things which can generate a profit as opposed those actions which lose money. People usually want to know what they are paying for, if they are receiving a quality-product, and how cost-effective is the means for producing a given product. Whether we like it or not, the public is quite serious in asking if they are getting their money's worth from their educational and legal institutions.

Education has essentially come under fire because there seems to be an unwillingness to question the quality of the product that is being produced. Many critics have claimed that educational quality is going down--ranging from the decline of SAT scores to the need for competency tests to eliminate social passing. This "back to basics" movement by the public, represents a desire for accountability. The public is now addressing questions to educators that are grounded in the economic model whereas they had been content to rely on a consensual mode of explanation. No surprise, education is the country's biggest business. The need exists in education to adopt other decision-making models.

The adversary model should be embraced more willingly to determine and select goals along with the economic model that administrators have been forced to contend with in their efforts to implement a wide variety of programs. During the last four decades, the consensus model has worked fairly well in education because resources were generally available to satisfy more constituencies. The legal-adversarial process for the most part was avoided by educators since it placed them in the precarious position of defending their programs. This has changed, especially in the last ten to fifteen years, as minority and special-interest groups have sought to restructure the overall shape of education through the courts (e.g. from integration to busing to bilingual programs to the recent passage of PL 94-142 dealing with the handicapped). Moreover, the economic model was not relied upon to make policy decisions in education because it was usually assumed that the monies that educators desired would be made available by pliable and supportive publics. This is not to say that economics was never a factor but rarely a primary consideration. Educational policy was essentially determined by consensus, legal considerations, and the operational costs of programs.

This has now flip-flopped (see Table 1). Economics are now very important, with legal mandates more frequently prescribing required courses of action for educators, while consensus is playing a much less important role within the educational arena. Perhaps, it is now proper to consider some other concepts that can be applied to the evaluation of educational programs that incorporates our previously mentioned conceptual models but addresses the contemporary reality. All future programs will have to answer questions about what is wanted, what may have to be negotiated and to what extent are all the players satisfied? Here we are speaking of what may be called, the payoff, the tradeoff and equity. Each can be defined as follows:

1. Payoff--the anticipated or actual outcome of a particular course of action stated in quantitative terms. In effect, the concept of payoff is related to the economic model.

2. Tradeoff--what kind of outcomes can be negotiated by participating publics as they consider alternative courses of action for various and respective desired outcomes. The tradeoff is analogous to the adversary process.

3. Equity--Equity can generally be described as fairness and justice to all. Legally, it implies impartial justice between two persons whose rights or claims are in conflict. In its broader sense, it represents the consensual model by making decisions.

The advantage of using terms like this rather than other labels like consensus, adversary, or economics, is that we may discard old biases and use payoff, tradeoff and equity for discussing the evaluation process. More importantly, evaluation should not be considered simply a formative or summative process whereby ongoing programs or their results are assessed, but rather evaluation should be considered as an "anticipatory-planning process" which seeks to assess the impact of a proposed program or policy before implementation. We need to consider the cost-effectiveness of a

Table 1

INVERSING THE CONCEPTUAL MODES

Conceptual Philosophy	Traditional--Key word flow in Education	Conceptual Inversion for Program/Policy Assessment
CONSENSUS--proceeds from common opinions and beliefs --primarily valuational in orientation--seeks to arrive at a collective decision. "Relativistic" outcome given valuational setting at point in time.	MASS--popular appeal	Payoff
ADVERSARY--adopts a point of view that is argued from a given body of factual information--outcome determined by most persuasive argument or position. "Absolute" outcome at point in time.	Legal Requirements	Tradeoff
ECONOMIC--presumes a course of action is proper if it makes a profit as opposed to a loss in market setting. "Optimal" outcome given market conditions.	Operational Costs	Equity

given program, the kinds of accountability that will be built into a program. More importantly, the people affected by any proposed public action should be able to participate in the planning and design decisions. At the very least, these publics deserve to be informed about the decisions that will be made and the decisions that have to be made. Let's consider the way in which anticipatory-evaluation might be applied to PL 94-142.

Anticipating and Assessing Outcomes

Anticipatory planning is in effect social impact assessment (SIA) which can be described as "applied futuristics." Basically, this is a scientific attempt to anticipate, measure, and project the consequences of a wide variety of sociocultural change programs that are concerned with change. The aim of social impact assessment is

> . . . to predict and evaluate the social effects of a policy, program, or project while still inthe planning stage before the effects have occurred. It involves the use of social forecasts to place the expectation and attainment of desired outcomes of legislative enactments and planning, on a rational and reliable basis. (Wolf 77:18)

This perspective is interdisciplinary and applied in its orientation. As a research tradition, SIA was thrust upon the scene with the passage of the National Environmental Policy Act (NEPA) of 1969. This act (PL 91-190) was passed as response to a growing public awareness that many federal projects do not sufficiently protect the national environment or involve the publics who were to be affected by proposed projects by federal agencies. This act acknowledged the need to anticipate the impacts of projects, policies, and programs on both the natural and social environment. It is ironic that most recent Federal legislation has required the generation of impact statements yet in the case of PL 94-142, there is no requirement

for assessing the impact of this program on local school districts, the state or even the national level. PL 94-142 could be significantly improved if the law included a provision necessitating a social impact statement.[8]

SIA researchers are concerned with three domains as outlined under NEPA; profile of the social setting; the likely impact of a proposed project; the assessment/evaluation of various alternatives available to administrators. The ultimate aim is to generate "go" or "no-go" comprehensive statements regarding a project given various senarios; that is, profiles of a social setting "with" or "without" a project displaying anticipated impacts and the necessary tradeoffs that might have to be made for the implementation of a proposed project (see Figures 1 and 2). SIA statements seek to fulfill the legal requirements of NEPA by providing: (1) an early identification of environmental consequences of any federally funded program; (2) written documentation which can be reviewed by various experts; and (3) information that must be made available to all interested publics.

Social impact assessments involve five distinct but interrelated analytical steps. They are as follows (Millsap 1979:9):

1. Profile the ambient condition of the community or setting through the collection of baseline data.

2. Project the likely outcomes with or without a given project, program, or policy.

3. Assess the probable outcome of alternative solutions to problems.

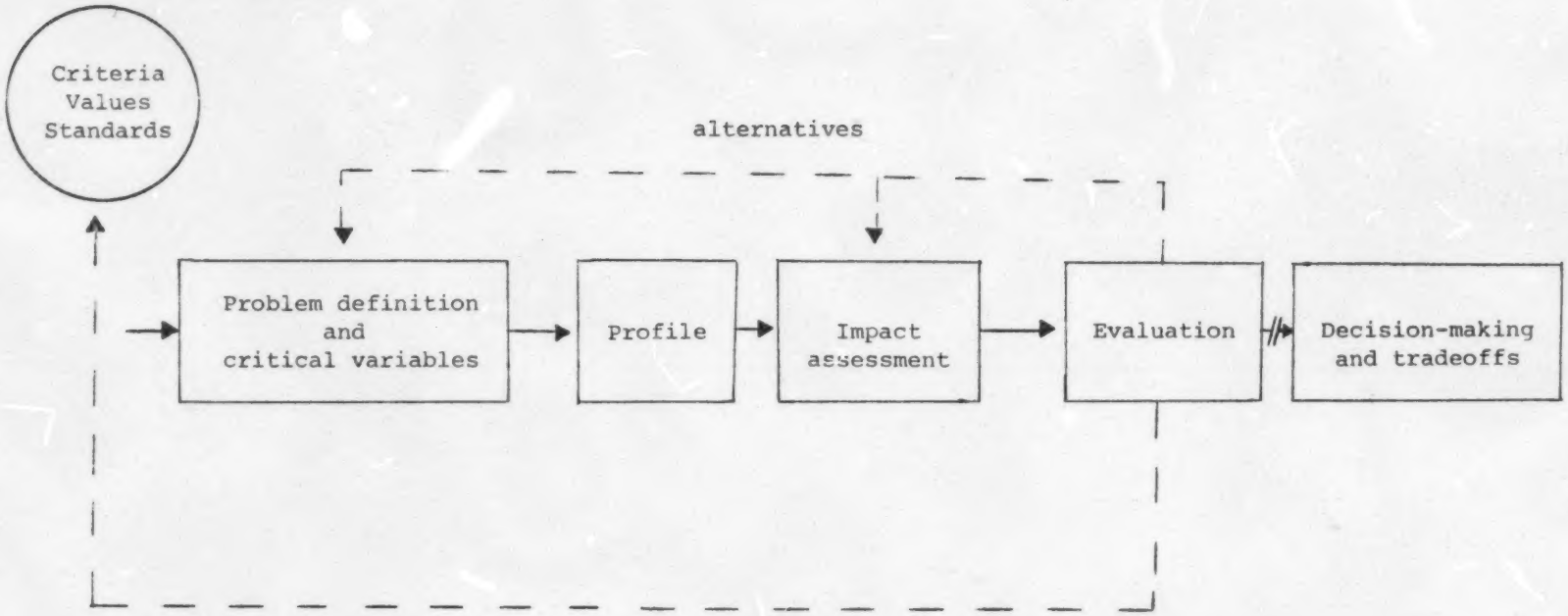
4. Evaluate the pros and cons of these alternative schemes of action as an eventual goal is sought.

5. Mitigate the disruptive effects that a chosen course of action will have upon a community group or neighborhood once a go/no-go decision is adopted.

The effect of NEPA has been a systemic interaction of economic, ecological, and social factors for planning most public projects today. This kind of

Figure 1

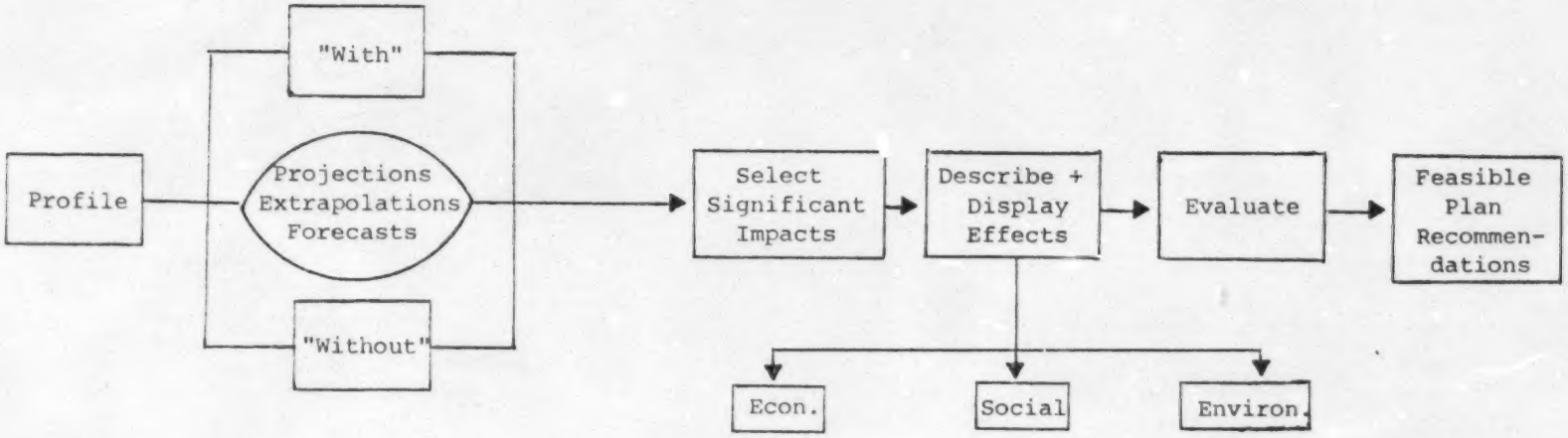
BACKGROUND OF SOCIAL IMPACT ASSESSMENT



(After Vlachos et. al. 1975:22)

Figure 2

SOCIAL IMPACT ASSESSMENT AND THE CONTEXT OF ENVIRONMENTAL ANALYSIS



(After Vlachos et. al. 1975:5)

planning takes for granted that a given payoff will be weighed against the kind of tradeoff necessary for the implementation of a given project. Moreover, the overall equitability of a given project or program as it impacts a particular setting whether natural or social is also considered in the planning process.

Many recent legislative enactments have followed NEPA in providing for local community input to the planning process. For example, the Rivers and Harbor and Flood Control Act of 1970 (PL 91-611), and recently the Community Development Act of 1974 (PL 93-383). The fact that community concerns and needs are called for illustrates what has been called "bottom-up" planning as opposed to "top down" planning (Jacobs 1978).[9]

The Handicapped Children Act of 1975 is an example of this type of planning. There is no attempt in this act to involve the local community. There is no place for the local educational agency to express how the requirements of the act will impact local educational concerns and resources. While it is commendable that "appropriate education" be extended to the handicapped, we should be careful that in the process of mainstreaming that the needs of the non-handicapped go unnoticed. This is not to say that any administrator or teacher would intentionally do this; the problem arises when districts are faced with limited resources to accomplish rigid goals. The law now mandates that special kinds of programs be developed (IEPs) for the handicapped, place the handicapped in the least restrictive environment (LRE), and extend as much appropriate education as is feasible. Well and good, but assuming that resources are limited, what happens to other individuals and programs in a community's schools?

The evaluation process places the burden of proof only upon ascertaining whether handicapped individuals are receiving appropriate education and

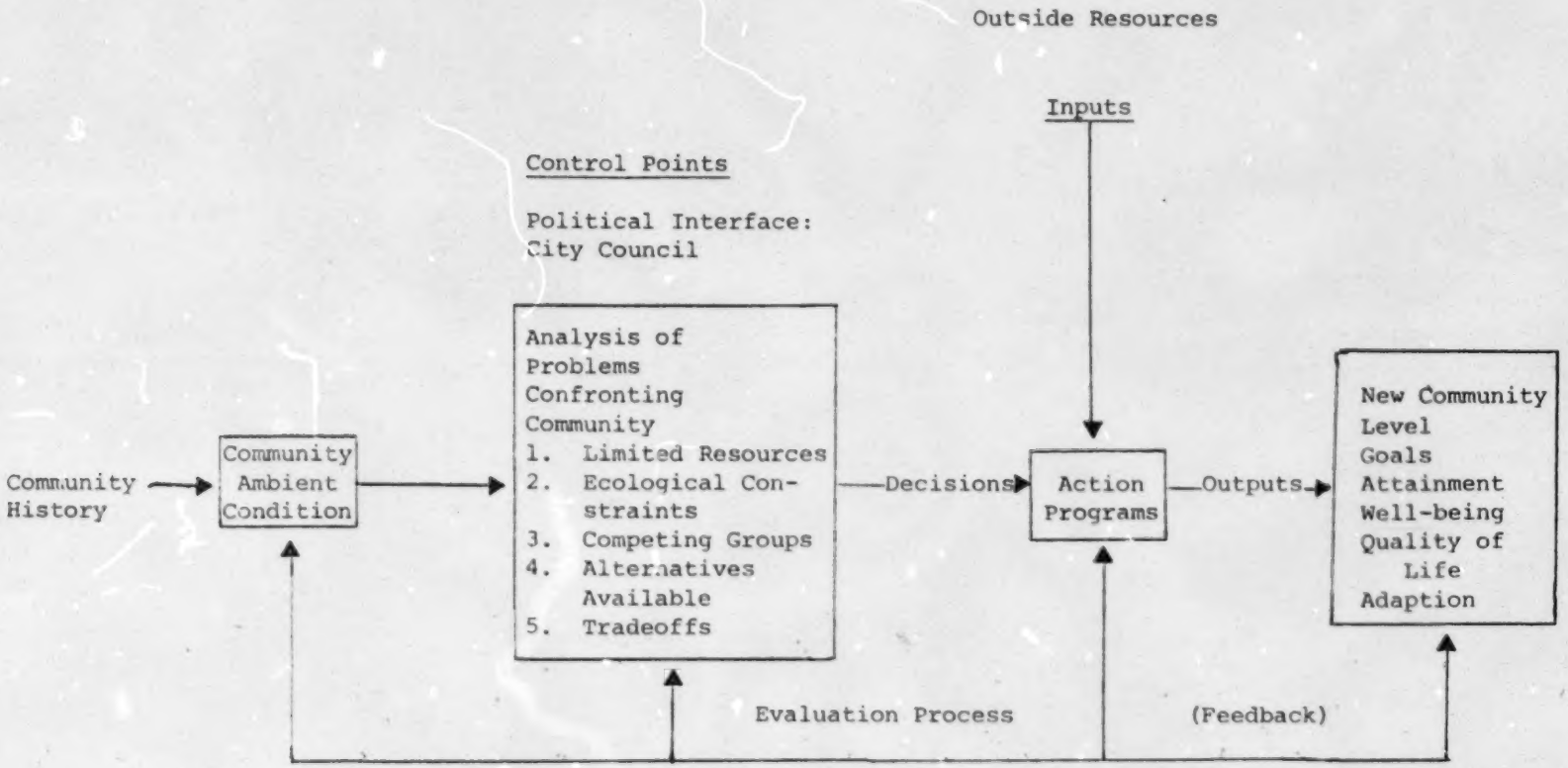
to the extent that their IEP fulfills the needs of a particular individual. The non-handicapped received no such evaluation, receive no such special training, and it may be questioned whether they will be short-changed. Most importantly, the community itself is not involved in this planning process, only the educators who are faced with having to meet the requirements of PL 94-142.

By way of contrast, the Community Development Act of 1974 (PL 93-383) required that there be special community meetings whereby the needs of the poor, as well as other members of the community, could be expressed for stating the needs of the community. In other words, these publics have input to the allocation of funds that are provided by the federal government for community development. This process is depicted in Figure 3.

Since administrators must implement the provisions of PL 94-142, they are confronted with maintaining their current programs, finding resources for exceptional children, and deciding how to juggle their dimes and nickles. It is unfortunate that more planning is not called for as LEAs seek to serve the genuine needs of the handicapped as well as the non-handicapped. This planning process should be oriented to multiobjective needs of each particular school district, not judged by distant bureaucratic criteria. These needs should be determined locally within the community and by local educators. The goal of providing for the handicapped should be weighted or scaled consistent with other pressing needs of the district but with all due sensitivity given to the special needs of the handicapped. For any given program, a Cost-Benefit and a Needs-Assessment study should be done in order to know exactly the needs of a given district bearing in mind the local payoff for any given district, the tradeoffs that are available to administrators, and the degree of equity achieved to each teacher and student

Figure 3

PROCEDURAL STEPS FOR ASSESSING COMMUNITY DEVELOPMENT



(Millsap 1978:70)

as quality education and appropriate education are sought within the LEA. The multiobjective approach as it could apply to PL 94-142 is displayed in Figure 4. Of course, this does not presume to cover every factor that may need to be considered, but it is an attempt to show the way in which an impact assessment model might be applied to a local school system displaying the system constraints and the anticipated needs to be addressed by the planning process.

It is also important to examine what alternative plans can be considered for any course of action that is taken at the local level. Figure 4 shows how to profile and project anticipated outcomes and alternative plans available for making decisions in a local setting. A typical multiobjective tradeoff procedure is shown in Figure 5. Having collected the necessary information, we can consider various courses of action. This is an evaluative procedure and depends upon the judgement of several respective publics; certainly teachers, administrators, community members and, of course, the requirements that are mandated by law. A given is meeting the requirements of the law, the cost-effectiveness of the programs to be chosen (remember Congress sets the appropriation level), the need for quality-productivity expected from students which might involve competency testing, and the need for increased staff accountability.

Perhaps a comment is in order here. As resources decline, there are the inevitable increased demands placed upon staff for productivity and quality. However, it is also true that a common rationale for why we fail falls back on the pat phrase, "we don't have enough!" Enough of what?--resources to be sure but this includes not only materials and money but also ingenuity, motivation, concern and guts. We can probably all do a lot more with less, which applies equally to teachers, administrators, and

BEST COPY AVAILABLE

Figure 4

IMPACT ASSESSMENT MODEL APPLIED TO LOCAL SCHOOL SYSTEM

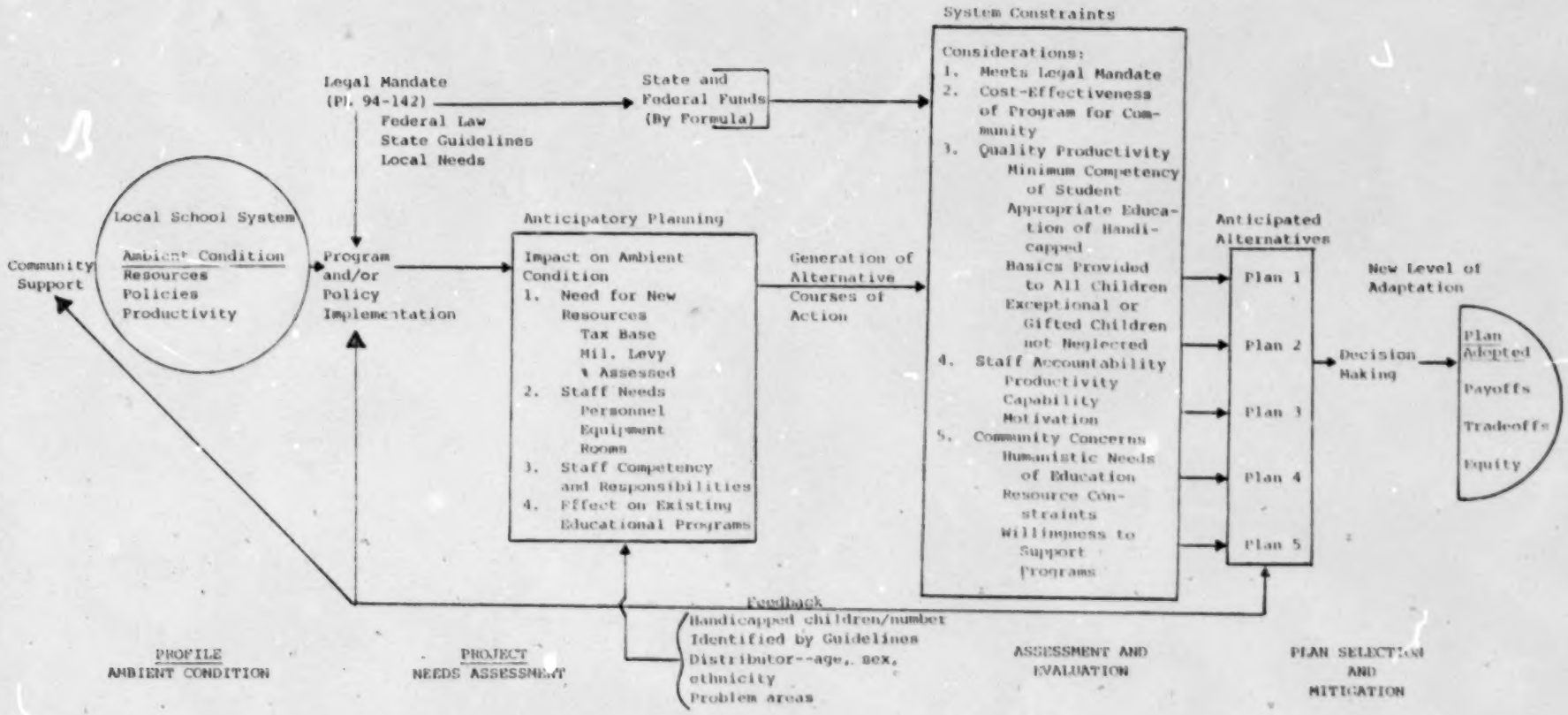


Figure 5

TYPICAL MULTIOBJECTIVE/TRADEOFF
PLANNING AND ASSESSMENT

		No Plan	Utopian	Non-Hand	Handicapped	Recc. Plan
Projected Well-Being of LEA Account[1]	1. Meets Legal Mandate 2. Cost-Effectiveness 3. Student Quality Productivity 4. Staff Accountability 5. Community Concerns					
Tradeoffs of Accounts[2]	Direct and Indirect Impacts					
	Short Term vs. Long Term Effects					
	Geographic Distribution					
	Special Groups Affected					

[1]Weight values usually assigned which can be measured either numerically or non-numerically (e.g. 1 thru 5, AA thru BB, or ++ thru --).
[2]Written statements are normally required for each category of planning.

(After Fitzsimmons 1975)

parents. We all have an individual responsibility to make the most of our given skills from a professional and private point of view.

As educators we must be sensitive to the needs of everyone in the community including minorities, the handicapped, and even the non-handicapped. We are going to have to learn how to make tradeoffs given resource limitations; how to weigh direct versus indirect impacts, short-term versus long-term effects, etc. There are no easy answers to these types of questions since every group believes its plight is primary. Every course of action involves several considerations, we can at best seek to optimize for the most effective and just outcome--possible the so-called pareto-optimal (i.e. the greatest good for greatest number). However, we all recognize that civil rights legislation and now Pl 94-142 were passed because some groups were overlooked. As stated earlier, we need to weigh goals against values and seek to negotiate tradeoff optimality.

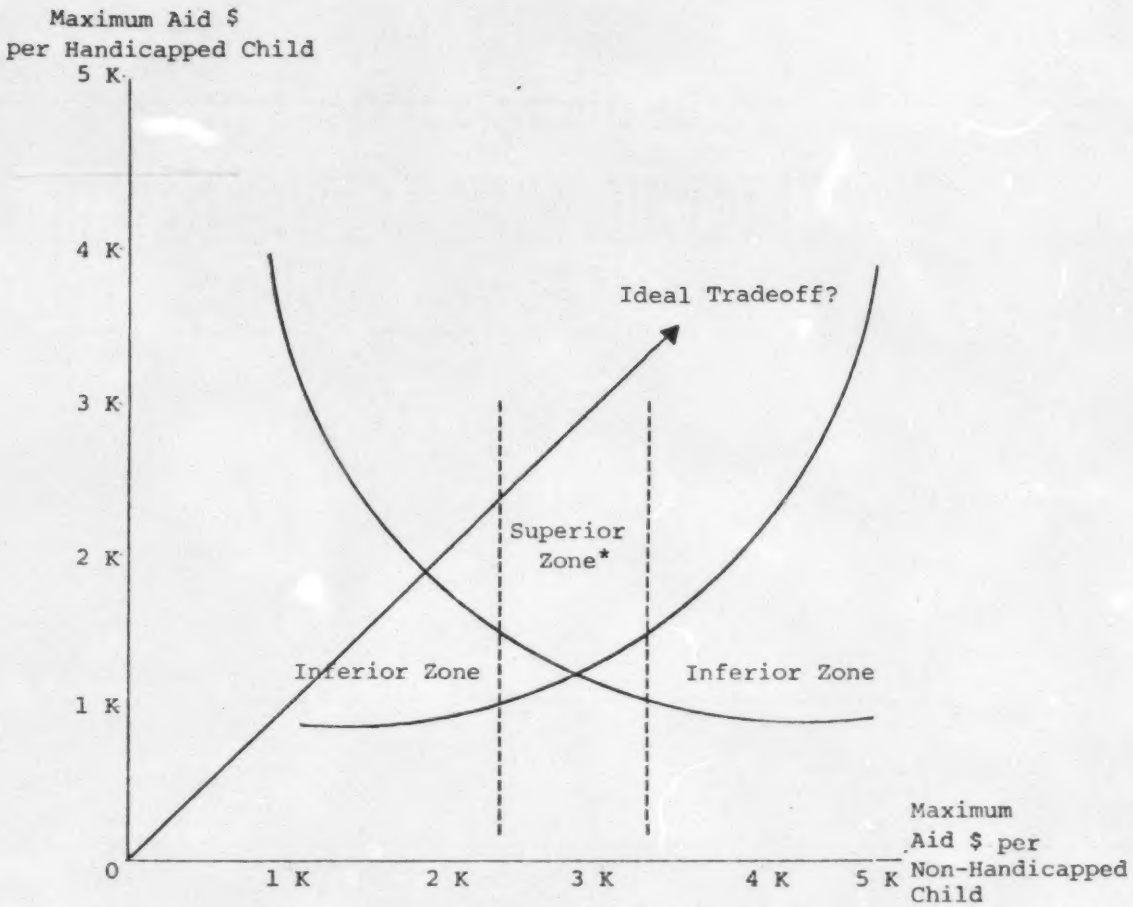
The ability to tradeoff is a willingness to understand another person's or group's outlook. A graphic display of this concept is portrayed in Figure 6, albeit crudely. Can we really accomplish maximum aid to the handicapped without some loss being experienced by others who need resources? The converse is also true. Certainly, this is not an attempt to maintain what was; rather, to present some ideas on how to achieve a middle ground without the pendulum swinging too far in anybody's direction.

Closing Thoughts

Overly simplistic, grandiose, and hastily applied solutions to social problems usually generate more discord than they do receptive and positive responses. PL 94-142 holds great promise but its potential and actual

Figure 6

Tradeoff Optimality



Assumption 1: Resources are limited, pareto-optimal seeks greatest good for greatest number

Assumption 2: One solution cannot be opted for without degrading another

Utopia View: Maximum possible aid to all children

*Hypothetical zone where groups are willing to tradeoff their respective positions given an examination of realistic constraints that exist in any system. This is known as the Surrogate Worth Tradeoff (SWT) Procedure (the Haimes and Hall 1974).

impact should be assessed in the local context of the community and educational setting its implementation will impact. This legislation will indeed test the accountability of all professionals and non-professionals alike as they interact in the educational arena. But just "passing a law" will not guarantee results. It is more likely that any so-called results shall be dependent upon an equitable balance between community participation, humanistic concerns, and the professional capabilities of educators.

Notes

1. This startling conclusion was first presented in a terse little book entitled The Limits to Growth published in 1972 by Dennis Meadows et. al. It was an outgrowth of a study prepared for a concerned study group--known as the Club of Rome. In short, it was concluded that economic limitations will soon impact negtively (by 2000 A.D.) the quality of life in industrial societies. Barry Commoner has argued in his Poverty of Power (1976) that America's energy resources will be depleted by the end of this century. Fred Hirsch (1976) has argued that energy and environmental constraints will surely result in the distinctive social limitations and capabilities.

2. Observers like Schumacher (1973), Heilbroner (1976), Perelman (1976), and Jungk (1977) all argue that there is a need to scale down technology, create new values and promote more participatory democracy. All of these writers take the position that people know what is good for them whereas the corporate-bureaucratic society can no longer effectively do the job in an era of no-growth.

3. Rostow (1978) describes himself as a "cautious optimist" but he basically believes that America can deal with a future that will be typlified by less growth. He further notes that growth can clearly be differentiated regionally within the U.S. stressing that any response to planning for the future must entail multiple objectives that relate to a given region's needs. Nevertheless, he like Miles (1976) believes that we need to "awaken from the American Dream" where the sky was the limit. Basically, we must plan for the future while not precipitously discounting our past.

4. See Time Magazine (1-15-79) "Private Colleges Cry 'Help'." This same article quotes a Carnigie Commission study that predicts another 300 institutions of higher learning will be closed due to financial strains in the 1980s.

5. This assertion is drawn as an observation from several sources that discuss the current demographic trends in the U.S. and some aspects of demands on the Social Security system. See, for instance, Social Indicators 1976, U.S. Department of Commerce. This report clearly projects an aging population for our country while the demands for welfare will be on the upswing. At present, there are three workers for each recepient in the social security program; by 2000 A.D. this will drop to two workers for each recepient--with the over 65 age group rising from the current 11 percent to 16 percent based on present demographic trends.

6. Exemplary of this point is the popular work by Charles Reich, The Greening of America (1970) who believes a new consciousness will emerge in our country in the decades to come. In the same genre, Jean-Francois Revel (1971) sees ideological changes taking place in American life without Mark or Jesus that may well redistribute power away from monolithic centers.

7. There is no need to belabor the many theories of social change that exist. It is given that environmental and behavioralist theories of social change stress conflict and/or diversity in accounting for cultural dynamics while consensus theories stress continuity and harmonious/integrative patterns of society that resist change.

8. It is remarkable that Pl 94-142 states almost in its opening line that eight million handicapped children are in the U.S. (i.e. 1975) with one million not receiving education yet considering the scope and depth of the legislation, no question is posed regarding the impact of its implementation which must have been in some minds since formula funding for conducting special education programs was dealt with at length.

9. This is not really a new issue. In economic development there has been a continuing argument whether development proceeds in underdeveloped nations by a "trickle-down" process or whether programs should "bubble-up" from the villate, etc. At present, the UNESCO and the World Bank have concluded that local programs accomplish more as well as are more cost-effective.

Literature Cited

Fitzsimmons, S. J. et. al.
1978 Social Assessment Manual: A Guide to the Preparation of the Social Well-Being Account. Cambridge, Massachusetts: Apt. Associates, Inc.

Haimes, Y. Y., and W. A. Hall
1974 "Multiobjective Analysis in Water Resource Systems Analysis: The Surrogate Worth Tradeoff Method." Water Resources Research, Vol. 10, No. 4, pps. 615-624.

Heilbroner, Robert L.
1974 An Inquiry into the Human Prospect. New York: W. W. Norton.

Hirsch, Fred
1976 Social Limits of Growth. Cambridge, Massachusetts: Harvard University Press.

Jacobs, Sue Ellen
1978 "Top-Down Planning": Analysis of Obstacles to Community Development in an Economically Poor Region of the Southwestern United States. Human Organization:37:246-256.

Jungk, Robert
1977 The Everyman Project: Resources for a Human Future. New York: Liveright.

Miles, Rufus E.
1976 Awaking from the American Dream: The Social and Political Limits to Growth. New York: Universe Press.

Millsap, William
1978 "New Tools for an Old Trade: Social Impact Assessment in Community and Regional Development" in Social Science Education for Regional Development. (William Vickers and G. Howze, eds.) Tuskegee Institute, Alabama: Center for Rural Development.

1979 "Payoffs and Tradeoffs: Some Thoughts on Decision-Making in Environmental Planning." Paper presented at the annual meeting of the Society for Applied Anthropology. Philadelphia, PA (March).

Perelman, Lewis J.
1976 The Global Mind: Beyond the Limits to Growth. New York: Mason-Charter Press.

Revel, Jean-Francois
1971 Without Mark or Jesus: The New American Revolution Has Begun. New York: Doubleday and Co.

Rostow, W. W.
1978 Getting from Here to There. New York: McGraw-Hill.

Schumacher, E. F.
1973 Small is Beautiful: Economic as if People Mattered. New York: Harper and Row.

Vlachos, Evan et. al.
1975 Social Impact Assessment: An Overview. Ft. Belvoir, VA: U.S. Army Institute for Water Resources. IWR Paper 75-P7.

Wolf, C. P.
1977 "Social Impact Assessment: The State of the Art Updated." SIA Newsletter 20:3-23.